

The opinion in support of the decision being entered today  
is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* NAOHIKO KIKUCHI and  
AKIRA MINAKOSHI

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Appeal No. 2007-2156  
Application No. 10/606,358  
Technology Center 1700

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Decided: August 22, 2007

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Before PETER F. KRATZ, JEFFREY T. SMITH, and  
LINDA M. GAUDETTE, *Administrative Patent Judges*.

SMITH, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from a final rejection of claims 1, 9, and 12. We have jurisdiction under 35 U.S.C. § 6.

The present invention relates to a studless tire which has superior performance on ice and snow. According to Appellants, the tire has improved adhesion resistance, digging friction, scratching friction and abrasion resistance on

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icy and snowy roads (Br. 5). Representative claim 1, as presented in Appellants' Brief, is reproduced below:

1. A studless tire having a tread comprising diene rubber and short glass fiber which is surface-treated in advance by a surface treating agent comprising sulfur containing mercaptosilane and dispersed in said diene rubber so as to be oriented in the tread thickness direction,

wherein when measured at 25°C, said tread has a ratio of complex elastic modulus E1 in the tread thickness direction and complex elastic modulus E2 in the tire circumferential direction of

$$1.1 \leq E1/E2 \leq 4$$

and a tread rubber hardness measured at -10°C of 45 to 75 degrees.

The Examiner relies on the following references in rejecting the appealed claims:

Marzoochi ('059)	US 3,364,059	Jan. 16, 1968
Marzocchi ('280)	US 3,620,280	Nov. 16, 1971
Uchida	EP 1 072 446 A2	Jan. 31, 2001

Claims 1, 9, and 12 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Uchida, Marzocchi '059 and Marzocchi '280. (Answer 3-7). We affirm the rejection.

Rather than reiterate the conflicting viewpoints advanced by the Examiner and the Appellants regarding the above-noted rejection, we make reference to the Answer (mailed December 28, 2006) for the Examiner's reasoning in support of the rejection, and to the Brief (filed October 16, 2006) for the Appellants' arguments thereagainst.

## OPINION

Upon careful review of the respective positions advanced by Appellants and the Examiner, we affirm for the reasons advanced by the Examiner and add the following primarily for emphasis.

Appellants argue that Uchida<sup>1</sup> fails to disclose or suggest the use of a surface treating agent for anchoring the sharp glass fibers to the rubber itself which is an important feature of the present invention and necessary to achieve Appellants' excellent results (Br. 10). Appellants also rely on the evidence presented in Table 1 of the Specification as evidence showing the importance of all the many features of the claimed invention (Br. 7).

Appellants' arguments and evidence are not persuasive of non-obviousness. Uchida discloses a studless tire having a tread comprising diene rubber and short glass fiber which is dispersed in said diene rubber so as to be oriented in the tread thickness direction (Uchida, col. 8, ll. 29-47). Uchida differs from the claimed invention in that the short glass fibers are not described as having been surface-treated in advance by a surface treating agent comprising sulfur containing mercaptosilane. The Examiner cites the Marzocchi '059 as evidence that a person of ordinary skill in the art would have recognized that surface treating agents comprising sulfur were known to have been utilized to anchor glass fibers in elastomeric materials (Answer 5-6). The Examiner cites Marzocchi '280 for a teaching that a surface treating agent comprising sulfur containing mercaptosilane

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<sup>1</sup> The Appellants refer to this reference as Ichida throughout the Brief.

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was known to have been utilized to anchor glass fibers in elastomeric materials (Answer 6-7).

Appellants' citation to Table 1 as evidence of non-obviousness is not persuasive for reasons set forth by the Examiner in the Answer (pages 8-9). We agree with the Examiner that the evidence presented is not commensurate in scope with the claimed invention and fails to provide testing of the closest prior art.<sup>2</sup> We recognize that the information presented in the graph has not been presented in the form of a declaration. However, even if the evidence were presented in a declaration, it would not be persuasive of non-obviousness for the reasons outlined in the present record.

Contrary to Appellants' arguments, it would have been obvious to combine the teachings of Uchida, Marzocchi '059 and Marzocchi '280 for the reasons stated by the Examiner. Uchida describes the advantages of incorporating short glass fibers into a studless tire. Uchida also discloses that it is desirable to prevent the fibers from dropping out of the tread surface during running (¶0013-0016). A person of ordinary skill in the art would have recognized that the advantages disclosed by Uchida would have been lost if the glass fibers were allowed to separate from the tire tread. A person of ordinary skill in the art seeking to prevent the glass fibers from separating from the tire tread would look to a surface treating

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<sup>2</sup> Appellants in the Brief (page 8) provide a graph exhibiting results achieved utilizing a comparative example 3 of Uchida and an example representative of the claimed invention. The Examiner correctly recognized that the data presented from Uchida is not representative of the invention disclosed therein.

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agent such as described by Marzocchi '059 and Marzocchi '280 to solve this problem.

#### CONCLUSION

Based on our consideration of the totality of the record before us, having evaluated the *prima facie* case of obviousness in view of Appellants' arguments and evidence, we conclude that the subject matter of claims 1, 9 and 12 would have been obvious to a person of ordinary skill in the art from the combined teachings of the cited prior art. *See In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Accordingly, the Examiner's rejection under 35 U.S.C. § 103 is affirmed.

#### TIME FOR TAKING ACTION

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(iv).

AFFIRMED

tf/lS

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The opinion in support of the decision being entered today  
is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* JOHN C. COLVIN,  
CHARLES VIGNAL,  
PHILIPPE EDOUARD TISSOT, and  
LARRY RAYMOND CROWE

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Appeal 2006-2589  
Application 10/618,499  
Technology Center 1700

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Decided: August 22, 2007

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Before THOMAS A. WALTZ, CATHERINE Q. TIMM, and  
JEFFREY T. SMITH, *Administrative Patent Judges*.

SMITH, *Administrative Patent Judge*.

DECISION ON APPEAL

Statement of the Case

This is an appeal under 35 U.S.C. § 134 from a final rejection  
of claims 1-15, 17-34, 37-39, and 41. We have jurisdiction under  
35 U.S.C. § 6.

Appellants' invention relates to an article having a lignocellulosic material impregnated with a polyisocyanate material. An understanding of Appellants' invention can be gleaned from independent claim 41 which appears below:

41. An article comprising a lignocellulosic substrate impregnated with a polyisocyanate material,

wherein the impregnated lignocellulosic substrate comprises a smooth, low-gloss surface,

and

wherein the substrate comprises a moisture content that is about 0.1 to less than 2% by weight after the substrate is dried and before the substrate is impregnated with the polyisocyanate material.

The Examiner relies on the following references in rejecting the appealed subject matter:

Diehr	US 3,870,665	Mar. 11, 1975
Mente	US 6,458,238 B1	Oct. 1, 2002

I. Claims 1-15, 17-34, 37-39, and 41 stand rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the original specification in such a way as to enable one skilled in the art to make and/or use the invention.

The issue presented is: Whether the Examiner has established that the subject matter of claims 41 meets the written description requirement of 35 U.S.C. § 112, first paragraph? We answer this question in the negative.

The Examiner contends that the Specification does not have a written description for the subject matter of claim 41. Specifically, the Examiner states, (Answer 3), “[t]he amended claim 41 introduces the new limitation ‘about 0.1 to less than 2% by weight’ of the moisture content in the substrate, has no proper support in the specification as originally presented”.

An *ipsis verbis* disclosure is not necessary to satisfy the written description requirement of § 112. Instead, the disclosure needs only to reasonably convey to persons skilled in the art that the inventor had possession of the subject matter in question. *See In re Edwards*, 568 F.2d 1349, 1351-52, 196 U.S.P.Q. 465, 467 (CCPA 1978). The Specification paragraph 0015 as originally filed clearly discloses that “the dehydration step results in lignocellulosic substrate 1 with a moisture content of less than 7% by weight, and more preferably about 0.1-2.5% by weight”. We agree with Appellants, (Brief 7), that the limitation ““about 0.1 to less than 2% by weight”” falls within the range disclosed in the above cited portion of the Specification.

The Examiner has failed to adequately explain why the portions of the Specification identified by the Appellants would not have reasonably conveyed to a person of ordinary skill in the art the scope of the presently invention claimed.

Accordingly, we are constrained to reverse the Examiner's 35 U.S.C. § 112, first paragraph, rejection of claims 1-15, 17-34, 37-39, and 41 as lacking an adequate written description for the subject matter presently claimed.

II. Claims 1-15, 17-34, 37-39, and 41 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Diehr in view of Mente.<sup>1</sup>

The Examiner contends that Diehr discloses articles formed from lignocellulosic materials impregnated with an organic polyisocyanate. Diehr discloses suitable lignocellulosic materials include chipboard, fiberboard, wood and straw. The Examiner recognized that Diehr did not disclose the moisture content required by the claimed invention. The Examiner contends that Mente describes lignocellulosic articles containing a moisture content of 2-15% by weight (Answer 4). Mente discloses that in order for the binder to function efficiently the moisture content of the lignocellulosic material should be maintained within this range (col. 4, ll. 33-41). The Examiner concluded that it would have been obvious to one of ordinary skill in the art to have employed a lignocellulosic material having the moisture content less than 2% in forming the articles of Diehr (Answer 4).

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<sup>1</sup> For this ground of rejection, Appellants have grouped the arguments for claims 1-15 separately from the arguments for claims 17-34, 37-39, and 41. We select claims 1 and 41 as representative of the respective groups.

Appellants contend that the combination of Diehr and Mente do not teach or suggest forming articles from lignocellulosic materials comprising the moisture content limitation of claim 41 (Br. 10).

The issue presented is as follows:

Has with the Examiner reasonably determined that a person of ordinary skill in the art would have found it obvious to employ lignocellulosic materials with the moisture content less than about 2% in forming the articles of Diehr, within the meaning of 35 U.S.C. § 103? On this record, we answer this question in the affirmative.

Under 35 U.S.C. § 103, the factual inquiry into obviousness requires a determination of: (1) the scope and content of the prior art; (2) the differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) secondary considerations. *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966). “[A]nalysis [of whether the subject matter of a claim would have been obvious] need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1740-41, 82 USPQ2d 1385, 1396 (2007) quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336-37 (Fed. Cir. 2006); *see also DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*,

464 F.3d 1356, 1361, 80 USPQ2d 1641, 1645 (Fed. Cir. 2006) (“The motivation need not be found in the references sought to be combined, but may be found in any number of sources, including common knowledge, the prior art as a whole, or the nature of the problem itself.”); *In re Bozek*, 416 F.2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969) (“Having established that this knowledge was in the art, the examiner could then properly rely, as put forth by the solicitor, on a conclusion of obviousness ‘from common knowledge and common sense of the person of ordinary skill in the art without any specific hint or suggestion in a particular reference.’”); *In re Hoeschele*, 406 F.2d 1403, 1406-07, 160 USPQ 809, 811-812 (CCPA 1969) (“[I]t is proper to take into account not only specific teachings of the references but also the inferences which one skilled in the art would reasonably be expected to draw therefrom . . .”). The analysis supporting obviousness, however, should be made explicit and should “identify a reason that would have prompted a person of ordinary skill in the art to combine the elements” in the manner claimed. *KSR*, 127 S. Ct. at 1731, 82 USPQ2d at 1389.

The Appellants’ arguments regarding the moisture content of the lignocellulosic material are not persuasive (Br. 10-12). The Examiner found that Diehr describes the formation of articles of lignocellulosic materials coated with an organic polyisocyanate. The Examiner recognized that Diehr did not describe the moisture content of the lignocellulosic material as 0.1 to less than 2.0% by weight as specified in the claimed invention (Answer 4-5).

However, the Examiner properly asserted that it would have been obvious to a person of ordinary skill in the art to form the articles of Diehr from a lignocellulosic material having a moisture content of less than 2.0% by weight. Mente describes lignocellulosic materials formed from materials having a moisture content of 2-15% (Answer 4). Mente discloses a preference for the moisture content to remain in a disclosed range in order to maintain binding efficiency (col. 4, ll. 33-41). Appellants acknowledge that ordinary stock lignocellulosic substrates have a moisture content of about 3-8% by weight (Specification [0015]). As such, a person of ordinary skill in the art would have reasonably expected that lignocellulosic materials having low moisture content such as slightly less than 2% by weight would have been suitable for forming the articles of Diehr. *Titanium Metals Corp. of Am. v. Banner*, 778 F.2d 775, 783, 227 USPQ 773, 779 (Fed. Cir. 1985) (holding that a prima facie case of obviousness exists even when the claimed range and the prior art range do not overlap but are close enough such that one skilled in the art would have expected them to have the same properties). Consequently, we conclude that a prima facie case of obviousness has been established which has not been adequately rebutted by Appellants.

We now turn to the subject matter of claim 1-15.

First, we note that claim 1 is written in product-by-process format. Therefore, the Examiner can satisfy his or her burden under § 103 if the prior art reasonably appears to disclose a product that is identical with or only slightly different from the product claimed.

*See In re Fitzgerald*, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980); *In re Fessmann*, 489 F.2d 742, 744, 180 USPQ 324, 325-26 (CCPA 1974). Once the Examiner meets this burden of proof, the burden shifts to Appellants to show that the claimed product materially differs from the product of the prior art. It is the product that must be gauged in light of the prior art, not the process limitations. *See In re Wertheim*, 541 F.2d 257, 271, 191 USPQ 90, 103 (CCPA 1976); *In re Fessmann*, *supra*.

The Examiner contends that the combination of Diehr in view of Mente suggests forming the article from lignocellulosic materials having a moisture content of less than 2% impregnated with an organic polyisocyanate. Appellants argue that the process steps of claim 1 impart distinctive structural characteristics to the resultant product (Br. 16-19).

Appellants have not provided evidence to establish that the process steps impart distinctive characteristics to the resultant product. Appellants have not directed us to evidence in the present record that establishes that the product produced from the process of claim 1 has different structural features from the product of the closest prior art. That is, Appellants have not directed us to evidence that exhibits the argued structural differences in the products resulting from the claimed invention and the prior art.

For the foregoing reasons and those presented in the Answer, the rejection of claims 1-15, 17-34, 37-39, and 41 under 35 U.S.C.

§ 103(a) as obvious over the combined teachings of Diehr and Mente is affirmed. As a final point with respect to the § 103 rejections, we note that Appellants base no argument upon objective evidence of nonobviousness, such as unexpected results.

ORDER

The rejection of claims 1-15, 17-34, 37-39, and 41 under 35 U.S.C. § 112, first paragraph is reversed. The rejection of claims 1-15, 17-34, 37-39, and 41 under 35 USC §103 (a) is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

tf/ls

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